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5 The compounds 6,6-pentamethylenefulvene, $C_5H_5CH_2Ph$,
($C_5H_4C(=CH_2)Ph$)Li, ($C_5H_4CMe_2Ph$)TiCl₃ (the catalyst used in
Example 1), ($C_5H_4SiMe_2Ph$)TiCl₃ (the catalyst used in Example 3),
10 ($C_5H_4CMe_2-3,5-Me_2C_6H_3$)TiCl₃ (the catalyst used in Example 2) and
 $B(C_6F_5)_3$ were prepared according to procedures known as such. 6,6-
Diethylfulvene was prepared analogously to 6,6-pentamethylenefulvene
from cyclopentadiene and 3-pentanone. ($C_5H_4CMe_2Ph$)TiMe₃ (used in
Examples 10 and 11) was prepared through modification of a known
10 procedure by reaction of ($C_5H_4CMe_2Ph$)TiCl₃ with either Me₂Mg or
MeMgI. The preparations of other titanium complexes are disclosed
hereafter in the Preparation Examples A to F.

15 A toluene solution of MAO (26 wt%, Akzo Nobel Chemicals), MAO
supported on silica (5 wt%, Witco) and [PhNMe₂H][B(C₆F₅)₄] (Akzo
Nobel Chemicals) were used as such.

20 NMR spectra were recorded on Varian Gemini 200/300 and Unity
500 spectrometers.

The ¹H NMR spectra were referenced to resonances of residual
protons in the deuterated solvents. Chemical shifts (δ) are given
relative to tetramethylsilane (downfield shifts are positive). GC
analyses were performed on a HP 6890 instrument equipped with a HP-1
25 dimethylpolysiloxane column (19095 Z-123). GC-MS analyses were
conducted using a HP 5973 mass-selective detector attached to a
HP 6890 GC instrument. Elemental analyses are the average of a least
two independent determinations.

30 Preparation example A

Preparation of ($C_5H_4CH_2Ph$)TiCl₃, to be used in Example 4.

a) Preparation of ($C_5H_4CH_2Ph$)Li

35 To a solution of 11.3 mmol n-BuLi in 30 ml of diethyl
ether/hexane at -40 °C, 1.87 g (12.0 mmol) of C₆H₅CH₂Ph [2] was added
dropwise. The reaction mixture was allowed to warm to room
temperature and stirred overnight. The solvents were removed in
vacuo. The white residue was stripped with pentane. After rinsing